

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
January 11, 2013**

REPORTS

Item No. 9 Residential Speed Limit

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

It is recommended that:

- The residential speed limit NOT be lowered to 40 km/h.
- The City continue to encourage layout of new residential areas that promote lower vehicle operating speeds on local residential streets.

ADMINISTRATIVE REPORT

Title: Residential Speed Limit

Critical Path: Standing Policy Committee on Infrastructure Renewal and Public Works

AUTHORIZATION

Author	Acting Department Head	CFO	CAO
L. Escobar, P.Eng., PTOE	K. Boyd, P.Eng.	n/a	Acting COO, M. Jack

RECOMMENDATIONS

It is recommended that:

- The residential speed limit NOT be lowered to 40 km/h.
- The City continue to encourage layout of new residential areas that promote lower vehicle operating speeds on local residential streets.

REASON FOR THE REPORT

At their meeting on July 18, 2012, Council motioned and referred to the Standing Policy Committee on Infrastructure Renewal and Public Works that Winnipeg Public Service consider lowering the residential speed limit in Winnipeg to 40 km/h.

At their meeting on September 11, 2012, the Standing Policy Committee on Infrastructure Renewal and Public Works recommended to Council:

1. That the Winnipeg Public Service be directed to report back in 90 days to the Standing Policy Committee on Infrastructure Renewal and Public Works on the Council Motion of July 18, 2012.
2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

At their meeting on September 27, 2012, Council concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works, and adopted the following:

1. That the Winnipeg Public Service be directed to report back in 90 days to the Standing Policy Committee on Infrastructure Renewal and Public Works on the Council Motion of July 18, 2012.
2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications as a result of this recommendation.

HISTORY

The Winnipeg Public Service has reviewed the implications of reducing the residential speed limit to 40km/h. The findings of the Winnipeg Public Service's review are attached in Appendix "A".

FINANCIAL IMPACT

Financial Impact Statement Date: December 13, 2012

Project Name: Residential Speed Limit

COMMENTS:

There is no financial impact associated with the recommendation of this report.

Original signed by D. Stewart, CA
D. Stewart, CA
Manager of Finance & Administration

CONSULTATION

In preparing this report there was consultation with: n/a

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: C. Desjardine, M.Sc., P. Eng., Community Traffic Engineer
S. Chapman, P. Eng., Traffic Management Engineer
Date: December 13, 2012
File No.: OG-19

Attachments: Appendix A Winnipeg Public Service Evaluation
Appendix B Survey of Canadian Jurisdictions

APPENDIX 'A'

Winnipeg Public Service Evaluation

Background

Speed limits are intended to facilitate the safe and orderly movement of vehicular traffic. When evaluating appropriate speed limits, consideration is given to vehicle operating speeds, collision experience, and roadside environment.

Vehicle operating speed is influenced by a number of factors including road function, physical characteristics of the road (geometry/alignment/access), adjacent land use, traffic volume and the presence of pedestrians and large vehicles.

Many studies conducted throughout North America have shown that driver's speed is mainly affected by the context of the road and not by speed limit signs.

Lowering the posted speed limit in isolation without concurrent changes to the physical characteristics of the road can have negative consequences. Speed limits that are inconsistent with driver expectations can lead to driver frustration. Some drivers will obey the lower speed limit while others will feel it is unreasonable and therefore ignore it. This creates a disruption in vehicular traffic and increases the potential for collisions between slower and faster drivers. Research has shown that when the majority of motorists travel at the same speed, the likelihood of a collision is minimized. When motorists do not travel at similar speeds, other road users, including pedestrians, will have difficulty judging the speed of approaching vehicles and hence chances of a collision are increased. Speed limits that are inconsistent with driver expectations breed disrespect and will not be complied with, except with extensive enforcement. This places an unnecessary burden on law enforcement personnel (cost and resources) with limited long-term results.

Speed Limit Research

A study conducted by the United States Department of Transportation, Federal Highway Administration (FHWA-RD-97-002), investigated the effects of raising and lowering the speed limit at 100 experimental sites in 22 states. A summary of the results indicated that, overall, raising or lowering the speed limits had little effect on the driver's speed choice (less than 3.2 km/h difference in mean speed and 85th percentile speed), and did not lead to any statistically significant changes in either total or severe collisions.

Similar results were exhibited in a recent study conducted by the City of Edmonton (REF: The City of Edmonton's Office of Traffic Safety Final Report Dated April 5, 2011), which investigated the effect of lowering the posted speed limit from 50 km/h to 40 km/h within six residential communities. The effect of the speed reduction was limited to a 2-3 km/h reduction in operating (85th percentile) speed:

- Operating speed decreased from about 60 to about 57 km/h in new communities
- Operating speed decreased from about 55 to about 53 km/h in communities with grid networks
- Operating speed decreased from about 53 to about 51 km/h in older communities

The results of the Edmonton collision analysis were deemed inconclusive as the results were not statistically significant. Subsequent to the pilot project three of the communities have reverted back to 50 km/h speed limits and three have retained the 40 km/h speed limit.

The desire to reduce speed limits is often based on the decrease in the probability of a pedestrian fatality resulting from a decrease in impact speed. Unfortunately, the above studies suggest that reducing the speed limit in isolation has a very limited effect on operating speed. Without a reduction in operating speed, the benefit of reduced impact speed in terms of reduced collision severity is not realized.

Survey of Canadian Jurisdictions

A survey of other Canadian jurisdictions by the Public Service (15 Provinces and Municipalities) indicates that Provinces and large cities have not made changes to the minimum or default speed of 50 km/h (full summary included in Appendix B). In many locations, there are no speed limits less than 50 km/h or speed limits lower than 50 km/h are only implemented in school zones. Surveyed jurisdictions where non-school zone speed limits are reduced below 50 km/h were found in Edmonton, Alberta (as mentioned above) and Montreal, Quebec.

Montreal introduced 40 km/h speed limits on a residential area (secteur) basis with special signing at entry points to the neighbourhoods. Vehicle operating speeds were evaluated approximately six months after the 40 km/h speed limit was established across all boroughs. The evaluation concluded that there was no significant difference in the average speeds or 85th percentile speeds after reducing the speed limit from 50 km/h to 40 km/h. Montreal will continue to study the effects of the 40 km/h speed limit. They are also developing a Sustainable Road Design Guide to assist with designing roads to promote a reduction in operating speeds.

Highway Traffic Board Considerations

Speed limits on the highways of Manitoba, including all streets in the City of Winnipeg, are set by The Highway Traffic Board of Manitoba. The Highway Traffic Act and the Manitoba Highway Speed Regulation define a restricted speed area that approximates the developed limits of the City. Within the restricted speed area, all streets have a 50 km/h speed limit except streets where a modified speed limit has been approved by the Highway Traffic Board. Modified speed limits in the City of Winnipeg are generally limited to Regional Streets and are all greater than 50 km/h. Approval of a 40 km/h speed limit for a street, neighbourhood or the entire City (with all non-40 km/h streets requiring modified speed limits) would require approval of a reduced restricted speed area by The Highway Traffic Board.

Although 50 km/h is the maximum permissible speed in an urban area (unless otherwise posted); drivers have a responsibility to operate at a lower speed as outlined in The Highway Traffic Act Section 95(3):

“No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent or in a manner that is not reasonable and prudent under the conditions and having regard to the actual and potential hazards then existing; and, without restricting the generality of the foregoing, no person shall drive a vehicle on a highway at a speed otherwise permitted under this Act where

(a) the presence of a child on or near the highway, whether or not he is in close proximity to the grounds of a school building or a playground, dictates, in the interest of safety, a slower speed or the temporary stopping of a vehicle; or

(b) any factor exists in the face of which failure to reduce that speed, or to stop the vehicle temporarily, constitutes a danger to any person or property visible to the driver.”

Broader Design Considerations

Much of the residential street network in the City of Winnipeg can accommodate a maximum speed limit of 50 km/h. A posted speed limit of 40 km/h would not reflect the design of the built environment in Winnipeg and would not be expected to have a significant effect on driver behaviour as evidenced by the studies in the United States and Edmonton. Where the context of the road promotes lower speeds, operating speeds can be expected to be lower.

The table below shows a sample of streets where Winnipeg Public Service has received concerns regarding speeding and as a result conducted speed studies. In all cases below, the 85th percentile speed is approximately 40 km/h even though the posted speed limit is 50 km/h (the 85th percentile speed is considered the operating speed and is the speed at which 85% of vehicles are travelling at or below). The results show that vehicle operating speeds are not influenced by the posted speed limit. Posted speed limits are maximum operating speeds and are not mandatory operating speeds. All of the below speed studies were conducted in 2012.

<i>Study Street Segment</i>	<i>85th Percentile Speed (2012)</i>
Gallagher Avenue between Blake Street and Quelch Street	39 km/h
Hazelwood Crescent between Wyoming Street and Iowa Street	41 km/h
Westminster Avenue between Lipton Street and Aubrey Street	42 km/h
Church Avenue between Charles Street and Aikins Street	42 km/h
Santa Fe Drive between Adsum Drive and Dr. Jose Rizal Way	43 km/h
Rathgar Avenue between Daly Street South and Cockburn Street South	43 km/h

Creating a residential environment that promotes lower operating speed is a complex process that must consider the influences of the built environment of both the street and adjacent land uses and involves developers as well as the City. Through various initiatives under Our Winnipeg, including Complete Communities and the Transportation Master Plan, the Public Service continues to support development of new residential communities that promote lower vehicle operating speeds through design and land use.

Recommendations

Based on the above information, Winnipeg Public Service does NOT recommend lowering the residential speed limit to 40 km/h. Research shows that lowering speed limits in isolation has a limited effect on vehicle operating speeds. The physical characteristics of the road and the traffic conditions have greater influence on vehicle speeds than the posted speed limit. Having an appropriate speed limit accomplishes the following:

- Satisfies law requirements;
- Encourages compliance from motorists;
- Effectively separates occasional violators from the complying majority;
- Provides realistic feedback to motorists.

The City will continue to encourage appropriate layout of new residential areas in order to meet the intent of having lower vehicle operating speeds on local residential streets.

APPENDIX 'B'

Survey of Canadian Jurisdictions

Jurisdiction	1. Has your jurisdiction made an across the board change to lower a minimum or default speed limit of 50 km/h to something lower than 50 km/h?	2. If no to #1, does your jurisdiction allow the speed limit to be reduced below the default of 50 km/h on specific streets?
Newfoundland	No	Individual roads may have speed limits reduced below 50 km/h
City of St. John's	No	Speed limits below 50 km/h are not permitted
Nova Scotia	No	40 km/h speed limits in residential areas studied in 2003 in Halifax. Study found very little compliance.
Halifax	No	Only school zone speed limits are permitted to be less than 50 km/h.
New Brunswick	No	Speed limits under 50 km/h are not supported.
Fredricton	No	Only school zone speed limits are permitted to be less than 50 km/h.
Quebec	No	Municipalities can lower speed limit below 50 km/h
Montreal	No	Speed limit lowered to 40 km/h in residential sectors
York Region	No	Only school zone speed limits are permitted to be less than 50 km/h.
Milton, Ont.	No	Only school zone speed limits are permitted to be less than 50 km/h.
Manitoba	No	There are a few locations with 40 km/h speed limits; Virden, Melita, Twin Lakes Beach. These 40 km/h approvals are old and many have reverted back to 50 km/h.
Alberta	No	Speed limits below 50 km/h are permitted based on Engineering review
Calgary	No	Some 40 km/h speed limits have been implemented on specific streets
Edmonton	No	40 km/h pilot project in six communities. Currently considering policy on 40 km/h speed limits.
Red Deer	No	Speed limits below 40 km/h are allowed.
Chilliwack	No	Speed limits below 50 km/h are not permitted